



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,019	12/31/2001	Xiaowei Weng	56.0622	7528
27452	7590	07/28/2004	EXAMINER	
SCHLUMBERGER TECHNOLOGY CORPORATION IP DEPT., WELL STIMULATION 110 SCHLUMBERGER DRIVE, MD1 SUGAR LAND, TX 77478			THOMPSON, KENNETH L	
		ART UNIT		PAPER NUMBER
				3672

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/039,019	WENG ET AL.
	Examiner Kenn Thompson	Art Unit 3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 26 April 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-14 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Huitt et al., U.S. 3,062,294.

Regarding claims 1 Huitt discloses a method for treating a subterranean formation having an uncased borehole (21) formed therein. Huitt discloses providing a well treatment tool (26) having at least first and second burst disk assemblies (56; fig 12) and an annulus isolation mechanism (22). Huitt discloses passing the tool into the borehole and positioning the tool in a suitable location for treating the formation. Huitt discloses pumping a treatment fluid through a conduit (24) to the tool and then into the formation.

As to claim 5, Huitt discloses in figure 12 the well fracturing tool provides a single fluid conduit (24) for providing treatment fluid to multiple intervals

Regarding claim 10, Huitt discloses a method for creating multiple fractures in a subterranean formation having an uncased borehole (24) formed therein. Huitt discloses providing a well fracturing tool (26) for forming a plurality of fractures in the formation having at least first and second burst disk assemblies (56) and an annulus isolation

mechanism (22). Huitt discloses passing the tool into the borehole and positioning the tool in a suitable location for fracturing the formation. Huitt discloses pumping a fracturing fluid through a conduit (24) to the tool and into the formation to cause the formation to fracture.

Regarding claim 11, Huitt discloses an apparatus for treating a subterranean formation having an uncased borehole (24) formed therein. Huitt discloses at least two burst disk assemblies (56) and an annulus isolation mechanism (22).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huitt et al., U.S. 3,062,294 in view of Muddiman U.S. 4,809,729.

As discussed above, Huitt et al. includes all the limitations of claim 2 with the exception of disclosing the specific structure of the burst disk. Muddiman discloses a burst disk made of a membrane and perforated disks (claim 1, figures 1 and 3). Muddiman teaches that this device provides an advantage over other assemblies because it works in both directions and thus it will not matter if it is installed in the "wrong" direction (column 2). Thus at the time of the invention it would have been obvious to use the burst disk of Muddiman as the burst disk in the invention of Huitt et al. because the Muddiman device simplifies the construction of the well treatment tool.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huitt et al., U.S. 3,062,294 in view of Muddiman U.S. 4,809,729 and further in view of Nierode et al., U.S. 5,890,536.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huitt et al., U.S. 3,062,294 in view of Nierode et al., US 5,890,536.

As discussed above, Huitt et al. (and Muddiman) include(s) all the limitations of claims 3, 4, 12, and 13 with the exception of disclosing a ball sealer to prevent flow through the disk assemblies. Nierode et al. teaches the use of ball sealers in fracturing operations (abstract). Nierode et al. further teaches that ball sealers are advantageous to use in fracturing operations because they are inexpensive (column 1). Thus at the time of the invention it would have been obvious to one having ordinary skill in the art to have used ball sealers when sealing the disk assemblies of Huitt et al. (and Muddiman) because they are inexpensive sealing devices, as taught by Nierode et al.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huitt et al., U.S. 3,062,294 in view of Hartley et al., US 5,449,039.

As discussed above, Huitt et al. includes all the limitations of claim 6 with the exception of disclosing the first burst disk having a lower bursting pressure. Hartley et al. teaches use of a the first burst disk having a lower bursting pressure (col. 6, lines 10-20) to Muddiman teaches that this device provides an advantage over other assemblies because it works in both directions and thus it will not matter if it is installed in the "wrong"

direction (column 2). Thus at the time of the invention it would have been obvious to use the burst disk of Muddiman as the burst disk in the invention of Huitt et al. because the Muddiman device simplifies the construction of the well treatment tool.

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huitt et al., U.S. 3,062,294 in view of Soliman et al., U.S. 5,111,881.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huitt et al., U.S. 3,062,294 in view of Nierode et al., U.S. 5,890,536 and further in view of Soliman et al., U.S. 5,111,881.

As discussed above, Huitt et al. (and Nierode et al.) include(s) all the limitations of claims 7-9 and 13 with the exception of disclosing cup packers, gel packing, sand plugs, and proppant plugs to isolate the annulus. Soliman et al. teaches the use of all of these devices in fracturing operations (column 7). As demonstrated by Soliman et al. all of these methods are well known in the art for sealing during fracturing. Thus at the time of the invention it would have been obvious to one having ordinary skill in the art to have used the claimed sealing methods when sealing during the fracturing process of Huitt et al. (and Nierode et al.) because they are well known in the art to be compatible with fracturing operations.

Response to Arguments

Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new grounds of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenn Thompson whose telephone number is 703 306-5760. The examiner can normally be reached on 7:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J Bagnell can be reached on 703 308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KT
19 June 2004



DAVID BAGNELL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600